Seaborne Target Overview

43rd Annual NDIA
Targets, UAV's & Range Operations
Symposium and Exhibition

Jeffrey L. Blume, P.E.
Head, Surface Targets Team
Naval Air Warfare Center Weapons Division
Pt. Mugu, California
jeffrey.blume@navy.mil

Unclassified

Outline

- Who we are
- What we do
- Remote Platforms
  - small high speed
  - mid-size, mid-speed
  - ship size
  - launch platforms
- Tow Targets

Seaborne Target Overview

Surface Targets Team

- **Mission:**
  - To provide seaborne target services to the Fleet, DoD, and Foreign Military Customers in support of weapon system T&E and Fleet Training
  - Cognizant Field Activity to NAVSEA for Seaborne Targets and augmentation systems
    - Development
    - T&E
    - In Service Engineering/depot
    - Integrated Logistics Support
    - Support To Other Operating Activities
  - Tri-Service Lead for Seaborne Targets

Unclassified

Seaborne Target Overview

Surface Targets Team

- **Customer Base**
  - SEABORNE TARGETS (PMS325/OPNAV N43)
    - RDT&E
    - LOGISTICS MANAGEMENT
    - IN-SERVICE ENGINEERING
    - ACQUISITION
    - MAINTENANCE SUPPORT
  - OPERATIONS
    - THIRD FLEET
    - HARPOON
    - SLAM
    - HARM
    - Other Field Activities/Services
  - OSD SUPPORT
    - MOBILE SHIP TARGET (MST)
    - AERIAL TARGET LAUNCH SHIP (ATLS)
    - COMMON DIGITAL ARCHITECTURE
  - SELF-DEFENSE TEST SHIP
  - FMS (VARIOUS)

Unclassified

Seaborne Target Overview

Small, high speed vessels

- **High speed maneuvering surface target (HSMST)**
  - **8m LOA, 3m Beam**
  - **2 LT Displacement**
  - **Aluminum hull w/foam sponson**
  - **45+ kts speed capability (35 kt. SS3)**
  - **Operates from fixed Range or mobile via PCCU**
  - **LOS to 25 km., OTH capable**
  - **COTS platform w/ Govt. owned onboard C^2**
- **Realistic littoral target for GUNEX and target acquisition**
- **Multiple targets, simultaneous presentation**
- **Can be used in Minehunting/clearing**

Unclassified

Seaborne Target Overview

Ship Deployable Surface Target

- **Remotely Controlled Personal Water Craft**
- **Potential to be deployed from aboard ship**
- **Utilizes Portable Command and Control Unit (PCCU) for deployed ops**

Unclassified

Seaborne Target Overview

Midsize, midspeed vessels

- **QST-35A SEPTAR**
  - **17m x 4.5m x 14 LT Disp.**
  - **15-20 kts**
  - **10 ton payload**
  - **Fully remote controlled**
  - **Varied augmentation**
    - **radar simulators**
    - **RF/IR**
    - **ECM/Chaff**
    - **scoring**
  - **Represents threats to 40m+**
  - **Demonstrated OTH capable**
  - **Mine countermeasure potential**

Unclassified

QST-35 Evolution

Fast Attack Craft Target

QST-35 Deficiencies

- **Slightly undersized**
  - **56 ft vice 65 ft**
  - **Marginal IR and RF signature representation**
- **Inadequate speed in developed seaway**
  - **15 knot capability**
  - **50 knots required**
- **Survivability**
  - **Amortized cost/impact is $550K**

Solution

- **Open-ocean performance craft**
  - **50+ feet**
  - **50+ Knots**
- **Survivability**
  - **$350K estimated production cost (vs. $900K)**
- **Also enables hi-speed towing**

Unclassified

FACT Target Prototypes

Unclassified

Seaborne Target Overview

Ship-sized Platforms

- Use of ex-combatants now limited
  - extremely costly
  - environmentally unfriendly
- Lack of threat realism
  - no mobility
  - fixed configuration
- Poor survivability
  - age
  - lack of watertight integrity
  - limited maintenance

Unclassified

Seaborne Target Overview

Mobile Ship Target

- Fully mobile to 15 kts
- Unmanned operation
  - OTH capable
- highly survivable
- hardened ship systems
- very low life-cycle cos
- low repair cost
- built to commercial standards

Mobile Ship Target
80m Version

Unclassified

Seaborne Target Overview

Mobile Ship Target

- **Configurable superstructure**
- **> 50 ton deck payload**

Unclassified

Seaborne Target Overview

Aerial Target Launch Ship (ATLS)

- Unmanned Operation
- Built to commercial standards
- Verified low life cycle cost
- Suitable for multiple systems
- Operation within hazard patterns
- TBM testing
- Manned ops/HVBSS

Unclassified

Seaborne Target Overview

Vandal Target Launch from ATLS

- First launch 18 Sept 03
- Vandal blast-test vehicle
- Ship unmanned and under remote control
- Ship speed 10 knots
- Successful launch
- No damage to ship

Unclassified

Aerial Target Launch Ship (ATLS)

Unclassified

Seaborne Target Overview

Tow Targets

- Used to simulate threats
- May be more cost effective
- Can be mobile or freely floating
- Survivable HARM/IR target
- Utilizes wide range of augmentation
- Can simulate multiple t
- Continued developmen

Unclassified

Low Cost Tow Target (LCTT)

- **Addresses all Fleet-designated training rqmts**
- **Capable of 40+ knots**
- **Survivability**
  - **>1500 rounds of 50 cal**
- **Durability**
  - **170 nm transit in SS2**
- **Self-righting with full augmen**
- **Towable from both HSMST & SDST**

Unclassified

Seaborne Target Overview

Operating Activities and Resources

- **Point Mugu, CA**
  - **QST-35, HSMST, ISTT, Trimaran, Williams Sled, Mobile Ship Target, HARM Barge, SDST, Aerial Target Launch Ship, LCTT**
- **Kauai, HI**
  - **QST-35, HSMST, ISTT, Trimaran**
- **Norfolk, VA**
  - **QST-35, HSMST, ISTT, Trimaran, LCTT**
- **Patuxent River, MD**
  - **QST-35, HSMST, HARM Barge, ISTT, Williams Sled, Trimaran**
- **MCAS Cherry Point, NC**
  - **HSMST, Trimaran**
- **Okinawa**
  - **HSMST, ISTT, SDST, HARM Barge**
- **SCORE**
  - **HSMST, LCTT**

Unclassified

Questions?